I MCA B 2023

PYTHON

LAB EXERCISE – 2

1.

```
# Create a LIST with your domain attributes, insert the elements using the
append (), insert(), extend().

my_list = []

my_list.append("Features")
my_list.append(["Description"])

my_list.insert(2, "Availability")

ID = [30]
my_list.extend(ID)

Details = ({"Name", "Email","Address" })
my_list.append(Details)

my_list.append(("Date", "Image", "Phone"))

Products= ({"Productname": "Flower"})
my_list.append(Products)
print("My List:", my_list)
```

OUTPUT :

```
My List: ['Features', ['Description'], 'Availability', 30, {'Name',
'Address', 'Email'}, ('Date', 'Image', 'Phone'), {'Productname':
'Flower'}]
```

2.

```
# Write a program to swap the first and last elements in a list

my_list = [10, 20, 30, 40, 50]

def swap_first_last(last):

  first = last[0]
  last[0] = last[-1]
  last[-1] = first

  return last

print("After Swapping : ",swap_first_last(my_list))
```

OUTPUT :

```
After Swapping :  [50, 20, 30, 40, 10]
```

3.

```
# Write a program to find the sum of the digits in a list

def listSum(numlist):
    sum=0
    for singleElement in numlist:
        sum+=singleElement
    print("The Sum is : ",sum)


listSum(my_list)
```

OUTPUT :

```
The Sum is :  150
```

4.

```
# Write a program to find the smallest element in a list

def min_element(lst):
  minimum = lst[0]
  for num in lst[1:]:
    if num < minimum:
      minimum = num
  return minimum

print("The Smallest is :")
print(min_element(my_list))
```

OUTPUT :

```
The Smallest is :
10
```

5.

```
# Sort the dictionary in ascending order based on the key of the dictionary

mydict={'a': 1, 'b': 2, 'c': 3,
'k': 11, 'm': 13, 'z': 26,
'a': 1, 'p': 16, 'q': 17, 'r': 18}

keys= list(mydict.keys())
keys.sort()
# new_dict= {key:mydict[key] for key in keys}
new_dict = dict(sorted(mydict.items(),key=lambda item : item[0]))
print(new_dict)
```

OUTPUT :

```
{'a': 1, 'b': 2, 'c': 3, 'k': 11, 'm': 13, 'p': 16, 'q': 17, 'r':
18, 'x': 24, 'y': 25, 'z': 26}
```

6.

```
# Find the sum of all the values in the dictionary

sum=0
print(mydict.items())
for key,val in mydict.items():
    sum+=val
    print(val)
print("Sum : ",sum)
```

OUTPUT :

```
dict_items([('a', 1), ('b', 2), ('c', 3), ('k', 11), ('m', 13),
('z', 26), ('p', 16), ('q', 17), ('r', 18)])
1
2
3
11
13
26
16
17
18
Sum :  107
```

7.

```
# Write a Python code to demonstrate the sorting in descending order of values
with lambda function


mydict={'a': 1, 'b': 2, 'c': 3,
'k': 11, 'm': 13, 'z': 26,
'a': 1, 'p': 16, 'q': 17, 'r': 18}

def sort_by_value_desc(d):
  # Create a list of tuples from the dictionary items
  items = list(d.items())
  # Sort the list by the second element of each tuple (the value) in reverse
order
  items.sort(key=lambda x: x[1], reverse=True)
  # Return a new dictionary from the sorted list
  return dict(items)

print()
print(sort_by_value_desc(mydict)) # {'c': 30, 'b': 20, 'a': 10}
```

OUTPUT :

```
{'z': 26, 'r': 18, 'q': 17, 'p': 16, 'm': 13, 'k': 11, 'c': 3, 'b':
2, 'a': 1}
```